

10674572_CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Reviewed

From A Search of 10674572 on March 30, 2005

- 6 360/322 (4 OR, 2 XR)
 - Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL
 - 360/110 HEAD
 - 360/313 .Magnetoresistive (MR) reproducing head
 - 360/322 ..Detail of sense conductor

- 5 360/324.12 (3 OR, 2 XR)
 - Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL
 - 360/110 HEAD
 - 360/313 .Magnetoresistive (MR) reproducing head
 - 360/324 ..Having Giant Magnetoresistive (GMR) or Colossal Magnetoresistive (CMR) sensor formed of multiple thin films
 - 360/324.1 ...Having one film pinned (e.g., spin valve)
 - 360/324.12Detail of free layer or additional film for affecting or biasing the free layer

- 4 29/603.07 (0 OR, 4 XR)
 - Class 029 : METAL WORKING
 - 29/592 METHOD OF MECHANICAL MANUFACTURE
 - 29/592.1 .Electrical device making
 - 29/602.1 ..Electromagnet, transformer or inductor
 - 29/603.01 ...Magnetic recording reproducing transducer (e.g., tape head, core, etc.)
 - 29/603.07Fabricating head structure or component thereof

- 4 29/603.08 (2 OR, 2 XR)
 - Class 029 : METAL WORKING
 - 29/592 METHOD OF MECHANICAL MANUFACTURE
 - 29/592.1 .Electrical device making
 - 29/602.1 ..Electromagnet, transformer or inductor
 - 29/603.01 ...Magnetic recording reproducing transducer (e.g., tape head, core, etc.)
 - 29/603.07Fabricating head structure or component thereof
 - 29/603.08Treating to affect magnetic properties

10674572_CLSTITLES

- 3 29/603.14 (2 OR, 1 XR)
 Class 029 : METAL WORKING
 29/592 METHOD OF MECHANICAL MANUFACTURE
 29/592.1 .Electrical device making
 29/602.1 ..Electromagnet, transformer or inductor
 29/603.01 ...Magnetic recording reproducing transducer
 (e.g., tape head, core, etc.)
 29/603.07Fabricating head structure or component
 thereof
 29/603.09Including measuring or testing
 29/603.13Depositing magnetic layer or coating
 29/603.14Plural magnetic deposition layers
- 3 257/649 (0 OR, 3 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/629 WITH MEANS TO CONTROL SURFACE EFFECTS
 257/632 .Insulating coating
 257/649 ..Insulating layer of silicon nitride or
 silicon oxynitride
- 3 257/774 (2 OR, 1 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/773 .Of specified configuration
 257/774 ..Via (interconnection hole) shape
- 3 257/E21.507 (0 OR, 3 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
 OR TREATMENT OF SEMICONDUCTOR OR SOLID
 -STATE DEVICES OR OF
 PARTS THEREOF (EPO)
 257/E21.002 .Manufacture or treatment of semiconductor
 device (EPO)
 257/E21.04 ..Device having at least one potential-jump
 barrier or surface barrier, e.g., PN junction,
 depletion layer, carrier concentration layer (EPO)
 257/E21.499 ...Assembling semiconductor devices, e.g.,
 packaging, including mounting, encapsulating,
 or treatment of packaged semiconductor (EPO)
 257/E21.506Attaching or detaching leads or other
 conductive members, to be used for carrying
 current to or from device in operation (EPO)

10674572_CLSTITLES

257/E21.507Formation of contacts to semiconductor by
 use of metal layers separated by insulating
 layers, e.g.,
 self-aligned contacts to source/drain or emitter/base (EPO)

.3 430/314 (2 OR, 1 XR)
 Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
 COMPOSITION, OR PRODUCT THEREOF
 430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
 RADIATION SENSITIVE MATERIAL, OR PRODUCT
 NG NONPLANAR OR
 OR PRODUCT
 430/311 .Making electrical device
 430/313 ..With formation of resist image, and etching
 of substrate or material deposition
 430/314 ...Etching of substrate and material deposition
 n

2 29/603.13 (0 OR, 2 XR)
 Class 029 : METAL WORKING
 29/592 METHOD OF MECHANICAL MANUFACTURE
 29/592.1 .Electrical device making
 29/602.1 ..Electromagnet, transformer or inductor
 29/603.01 ...Magnetic recording reproducing transducer
 (e.g., tape head, core, etc.)
 29/603.07Fabricating head structure or component
 thereof
 29/603.09Including measuring or testing
 29/603.13Depositing magnetic layer or coating

2 29/603.16 (0 OR, 2 XR)
 Class 029 : METAL WORKING
 29/592 METHOD OF MECHANICAL MANUFACTURE
 29/592.1 .Electrical device making
 29/602.1 ..Electromagnet, transformer or inductor
 29/603.01 ...Magnetic recording reproducing transducer
 (e.g., tape head, core, etc.)
 29/603.07Fabricating head structure or component
 thereof
 29/603.16Machining magnetic material (e.g.,
 grinding, etching, polishing)

2 216/22 (2 OR, 0 XR)

10674572_CLSTITLES

Class 216 : ETCHING A SUBSTRATE: PROCESSES
 216/22 FORMING OR TREATING ARTICLE CONTAINING
 MAGNETICALLY RESPONSIVE MATERIAL

2 257/301 (1 OR, 1 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/264 ...Enhancement mode or with high resistivity
 channel (e.g., doping of 10^{15} cm⁻³ or
 less)
 257/288 .Having insulated electrode (e.g., MOSFET, MOS
 diode)
 257/296 ..Insulated gate capacitor or insulated gate
 transistor combined with capacitor (e.g.,
 dynamic memory
 cell)
 257/301 ...Capacitor in trench

2 257/302 (1 OR, 1 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/264 ...Enhancement mode or with high resistivity
 channel (e.g., doping of 10^{15} cm⁻³ or
 r less)
 257/288 .Having insulated electrode (e.g., MOSFET, MOS
 diode)
 257/296 ..Insulated gate capacitor or insulated gate
 transistor combined with capacitor (e.g.,
 dynamic memory
 cell)
 257/301 ...Capacitor in trench
 257/302Vertical transistor

2 257/640 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/629 WITH MEANS TO CONTROL SURFACE EFFECTS
 257/632 .Insulating coating
 257/635 ..Multiple layers
 257/640 ...At least one layer of silicon nitride

2 257/751 (1 OR, 1 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/741 .Of specified material other than unalloyed
 aluminum
 257/750 ..Layered
 257/751 ...At least one layer forms a diffusion barrier

r

10674572_CLSTITLES

2 257/758 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
 257/741 .Of specified material other than unalloyed
 aluminum
 257/750 ..Layered
 257/758 ...Multiple metal levels on semiconductor,
 separated by insulating layer (e.g., multip
 le level
 metallization for integrated circuit)

2 257/E21.576 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E21.531 ...For electrical parameters, e.g.,
 resistance, deep-levels, CV, diffusions
 by electrical means
 (EPO)
 257/E21.532 .Manufacture or treatment of devices
 consisting of plurality of solid-state
 components formed in
 or on common substrate or of parts there
 of; manufacture of
 integrated circuit devices or of part
 hereof (EPO)
 257/E21.536 ..Manufacture of specific parts of devices
 (EPO)
 257/E21.575 ...Interconnections, comprising conductors and
 dielectrics, for carrying current between
 separate
 components within device (EPO)
 257/E21.576Characterized by formation and post
 treatment of dielectrics, e.g., planarizin
 g (EPO)

2 257/E21.592 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E21.531 ...For electrical parameters, e.g.,
 resistance, deep-levels, CV, diffusi
 ns by electrical means
 (EPO)
 257/E21.532 .Manufacture or treatment of devices
 consisting of plurality of solid-state
 components formed in
 or on common substrate or of parts the
 reof; manufacture of
 integrated circuit devices or of parts
 thereof (EPO)
 257/E21.536 ..Manufacture of specific parts of devices

10674572_CLSTITLES

(EPO)

257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate

components within device (EPO)
257/E21.576Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)

257/E21.591Modifying pattern or conductivity of conductive members, e.g., formation of alloys, reduction of contact resistances (EPO)

257/E21.592By altering solid-state characteristics of conductive members, e.g., fuses, in situ oxidation, laser melting (EPO)

2 257/E21.652 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

Could not find subclass title.

2 257/E21.665 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

Could not find subclass title.

2 257/E23.16 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E23.139 ...Liquid at normal operating temperature of device (EPO)

257/E23.141 .Arrangements for conducting electric current within device in operation from one component to another,

interconnections, e.g., wires, lead frames (EPO)

257/E23.142 ..Including external interconnections consisting of multilayer structure of conductive and insulating layers inseparably formed on semiconductor body

(EPO)

257/E23.154 ...Characterized by materials (EPO)

257/E23.155Conductive materials (EPO)

257/E23.157Based on metals, e.g., alloys, metal silicides (EPO)

257/E23.158Principal metal being aluminum (EPO)

257/E23.16Additional layers associated with aluminum layers, e.g., adhesion, barrier, cladding layers

10674572_CLSTITLES
(EPO)

2 257/E23.172 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.139 ...Liquid at normal operating temperature of
device (EPO)
257/E23.141 .Arrangements for conducting electric current
within device in operation from one compo
nent to another,
interconnections, e.g., wires, lead frame
s (EPO)
257/E23.169 ..Interconnection structure between plurality
of semiconductor chips being formed on or
in insulating
substrates (EPO)
257/E23.172 ...Assembly of plurality of insulating
substrates (EPO)

2 257/E23.177 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.139 ...Liquid at normal operating temperature of
device (EPO)
257/E23.141 .Arrangements for conducting electric current
within device in operation from one compo
nent to another,
interconnections, e.g., wires, lead frame
s (EPO)
257/E23.169 ..Interconnection structure between plurality
of semiconductor chips being formed on or
in insulating
substrates (EPO)
257/E23.177 ...Flexible insulating substrates (EPO)

2 257/E23.178 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.139 ...Liquid at normal operating temperature of
device (EPO)
257/E23.141 .Arrangements for conducting electric current
within device in operation from one compo
nent to another,
interconnections, e.g., wires, lead frame
s (EPO)
257/E23.169 ..Interconnection structure between plurality
of semiconductor chips being formed on or
in insulating
substrates (EPO)
257/E23.178 ...Chips being integrally enclosed by
interconnect and support structures (EPO)

10674572_CLSTITLES

2 257/E27.005 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E27.001 DEVICE CONSISTING OF A PLURALITY OF
 SEMICONDUCTOR OR OTHER SOLID STATE COMPONENTS
 FORMED IN OR
 ON A COMMON SUBSTRATE, E.G., INTEGRATED CIRCUIT DEVICE
 (EPO)
 257/E27.005 .Including component using galvano-magnetic
 effects, e.g. Hall effect (EPO)

2 257/E27.098 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E27.006 .Including piezo-electric, electro-resistive,
 or magneto-resistive component (EPO)
 257/E27.009 .Including semiconductor component with at
 least one potential barrier or surface
 barrier adapted for
 rectifying, oscillating, amplifying, or
 switching, or
 Including integrated passive circuit elements (EPO)
 257/E27.01 ..With semiconductor substrate only (EPO)
 257/E27.07 ...Including a plurality of individual
 components in a repetitive configuration
 (EPO)
 257/E27.081Including field-effect component (EPO)
 257/E27.098Static random access memory, SRAM,
 structure (EPO)

2 257/E29.346 (0 OR, 2 XR)
 Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E29.162Insulating materials for IGFET (EPO)
 257/E29.166 .Types of semiconductor device (EPO)
 257/E29.325 ..Controllable only by variation of electric
 current supplied or only electric potential
 applied to
 electrode carrying current to be rectified,
 amplified,
 oscillated, or switched (EPO)
 257/E29.342 ...Capacitor with potential barrier or surface
 barrier (EPO)
 257/E29.345Metal-insulator-semiconductor (e.g., MOS
 capacitor) (EPO)
 257/E29.346Trench capacitor (EPO)

2 360/320 (1 OR, 1 XR)

10674572_CLSTITLES

Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL

360/110 HEAD

360/313 .Magnetoresistive (MR) reproducing head

360/320 ..Detail of head insulation

2 360/324.11 (0 OR, 2 XR)

Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL

360/110 HEAD

360/313 .Magnetoresistive (MR) reproducing head

360/324 ..Having Giant Magnetoresistive (GMR) or Colossal Magnetoresistive (CMR) sensor for

armed of multiple

thin films

360/324.1 ...Having one film pinned (e.g., spin valve)

360/324.11Detail of pinned film or additional film for affecting or biasing the pinned film

2 384/912 (0 OR, 2 XR)

Class 384 : BEARINGS

384/900 COOLING OR HEATING

384/912 .Metallic

2 419/28 (0 OR, 2 XR)

Class 419 : POWDER METALLURGY PROCESSES

419/1 POWDER METALLURGY PROCESSES WITH HEATING OR SINTERING

419/26 .Post sintering operation

419/28 ..Subsequent working

2 428/553 (0 OR, 2 XR)

Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES

428/544 ALL METAL OR WITH ADJACENT METALS

428/546 .Having metal particles

428/548 ..Composite; i.e., plural, adjacent, spatially distinct metal components (e.g., layers, etc.)

428/553 ...Nonparticulate metal component

2 428/677 (0 OR, 2 XR)

Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES

428/544 ALL METAL OR WITH ADJACENT METALS

428/615 .Composite; i.e., plural, adjacent, spatially distinct metal components (e.g., layers, joints, etc.)

428/655 ..Transition metal-base component

10674572_CLSTITLES

428/668 ...Group VIII or IB metal-base component
 428/674Cu-base component
 428/676Next to Fe-base component
 428/677Fe-base has 0.01-1.7% carbon (i.e., steel)

2 430/319 (0 OR, 2 XR)

Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS, COMPOSITION, OR PRODUCT THEREOF

430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF RADIATION SENSITIVE MATERIAL, OR PRODUCT

G NONPLANAR OR

PRINTING SURFACE - PROCESS, COMPOSITION,

OR PRODUCT

430/311 .Making electrical device
 430/319 ..Named electrical device

2 438/619 (0 OR, 2 XR)

Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
 438/597 .To form ohmic contact to semiconductive material
 438/618 ..Contacting multiple semiconductive regions (i.e., interconnects)
 438/619 ...Air bridge structure

2 438/638 (1 OR, 1 XR)

Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
 438/597 .To form ohmic contact to semiconductive material
 438/618 ..Contacting multiple semiconductive regions (i.e., interconnects)
 438/622 ...Multiple metal levels, separated by insulating layer (i.e., multiple level me

tallization)

438/637With formation of opening (i.e., viahole) in insulative layer
 438/638Having viaholes of diverse width

2 438/758 (0 OR, 2 XR)

Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/758 COATING OF SUBSTRATE CONTAINING SEMICONDUCTOR

10674572_CLSTITLES
REGION OR OF SEMICONDUCTOR SUBSTRATE